

## EIC SEARCH RESULTS

**Serial No. 10/671,927 – Spare-wheel carrier for a motor vehicle**

ASRC Searcher: Ethel Leslie

Date: April 28 & May 1, 2006

### Foreign & International Patent Search

#### Search Strategy

Set	Items	Description
S1	147160	SPARE? ? OR EXTRA OR EMERGENC???
S2	543066	TIRE OR TIRES OR TYRE OR TYRES OR WHEEL? ?
S3	2779979	CARRIER? OR RACK OR RACKS OR MOUNT? ? OR HOLDER? OR STORING OR STORAGE? OR TAILGATE? OR TAIL()GATE? ?
S4	2582991	SENSOR? OR SENSE? ? OR SENSING OR DETECTOR? OR DETECT OR D- TECTS OR DETECTED OR DETECTING OR LOCATOR?
S5	3036445	SIGNAL? OR INDICAT? OR WARN? ? OR WARNED OR WARNING? OR AL- ARM? OR INFORM???
S6	5298027	LOCATION? OR POSITION? OR LOCK OR LOCKS OR LOCKED OR LOCKI- NG OR CLOSE? ? OR CLOSING OR UNLOCK??? OR OPEN???
S7	427926	IC=(B62D? OR B60R? OR B60B? OR B60C?)
S8	3921	S1(5N)S2
S9	12	S8 AND S3 AND S4 AND S5
S10	38	S8 AND S3 AND S4
S11	16	(S10 NOT S9) AND S7
S12	16943	S2(5N)S3
S13	483	S12 AND S4 AND S5
S14	301	S12(S)S4(S)S5
S15	226	S12 AND S4 AND S5 AND S6
S16	65	S15 AND S7
S17	103	S12 (S) S4 (S) S5 (S) S6
S18	31	S17 AND S7
S19	29	S18 NOT (S9 OR S11)
S20	410951	S4(10N)S6
S21	124	S12 AND S20 AND S5
S22	60	S12(S)S20(S)S5
S23	17	(S22 NOT (S9 OR S11)) AND S7
S24	1000	S1(5N)S2(5N)S3
S25	11	S24 (S) S4
S26	1	S25 NOT (S9 OR S11)
S27	0	S26 AND S7
S28	12	S24 AND S4 AND S6
S29	0	S28 NOT (S9 OR S11 OR S26)
S30	216557	S5(5N)S6
S31	8	S8 AND S30 AND S4
S32	6	S31 NOT (S9 OR S11)
S33	40	S12 AND S20 AND S30
S34	11	(S33 NOT (S9 OR S11 OR S32)) AND S7
S35	53111	(REAR OR BACK OR TAILGATE OR TAIL()GATE) (5N)S2
S36	249	S35 AND S3 AND S4 AND S5
S37	123	S35(S)S3(S)S4(S)S5

S38 75 (S37 NOT (S9 OR S11 OR S32)) AND S7  
 S39 15 S38 (S) S6  
 S40 2453 (TIRE OR TIRES OR TYRE OR TYRES) (5N)S3  
 S41 77 S40 AND S4 AND S5  
 S42 54 S40(S)S4(S)S5  
 S43 41 (S42 NOT (S9 OR S11 OR S32 OR S39)) AND S7  
 S44 465 S2(5N)S3(5N)S4  
 S45 182 S44 AND S5  
 S46 133 S44(S)S5  
 S47 35 (S46 NOT (S9 OR S11 OR S32 OR S39 OR S43)) AND S7

File 347:JAPIO Dec 1976-2005/Dec(Updated 060404)

(c) 2006 JPO & JAPIO

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200627

(c) 2006 Thomson Derwent

## Search Results

9/5/3 (Item 3 from file: 347)

DIALOG(R)File 347:JAPIO

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01096179 \*\*Image available\*\*

AUTOMATIC MOUNTING DEVICE FOR **SPARE TIRE**

PUB. NO.: 58-033579 [JP 58033579 A]

PUBLISHED: February 26, 1983 (19830226)

INVENTOR(s): FUJII HIROSHI

APPLICANT(s): MAZDA MOTOR CORP [000313] (A Japanese Company or Corporation)  
 , JP (Japan)

APPL. NO.: 56-132985 [JP 81132985]

FILED: August 24, 1981 (19810824)

INTL CLASS: [3] B62D-065/00

JAPIO CLASS: 26.2 (TRANSPORTATION -- Motor Vehicles); 35.1 (NEW ENERGY  
 SOURCES -- Solar Heat)

JAPIO KEYWORD:R131 (INFORMATION PROCESSING -- Microcomputers &  
 Microprocessors)

JOURNAL: Section: M, Section No. 215, Vol. 07, No. 112, Pg. 128, May  
 17, 1983 (19830517)

### ABSTRACT

PURPOSE: To enhance accuracy of action and an energy-conserving effect, by a method wherein an industrial robot is synchronized with a vehicle by a microcomputer, and a **spare tire** is automatically mounted on the vehicle, in a conveyor line for various models of vehicles.

CONSTITUTION: The robot 11 is at a standby position in the condition wherein a tire **holder** 21 attached to the tip of the second robot arm 20 is located in the front side of a roller table 8 and the **spare tire** 10 is held by the **holder** 21. When the vehicle 1 is conveyed and is **detected** by a **detecting** means, a vehicle detection **signal** (a) is inputted into the microcomputer 24, whereby calculating parts 25, 26, 27 for a working position, a synchronized operation and an operating timing are operated, and outputs from the calculating parts 25, 26, 27 are inputted into a driving part 31 for the robot 11. A main body 16 of the robot 11 is moved

upwards to a predetermined height, thereafter it synchronously follows up to the vehicle 1 while rotating and causing the first robot arm 18 to extend or contract, inclines the holder 21 and simultaneously retracts a position-holding pin 22 so that the spare tire 10 is supplied under its own weight to a predetermined position in a trunk room 3 of the vehicle 1 with a trunk lid 2 opened.

9/5/4 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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016970942 \*\*Image available\*\*

WPI Acc No: 2005-295255/200530

Related WPI Acc No: 2004-727287

XRPX Acc No: N05-242468

Tire carrier assembly for vehicle e.g. trailer, has sensor activated when carrier is in stowed position, and warning indicator activated when carrier is out of stowed position and sensor is not activated

Patent Assignee: FLYNN C (FLYN-I); KNOX R (KNOX-I); POSANI M (POSA-I); STEINER W J (STEI-I); TRUCKEY J (TRUC-I)

Inventor: FLYNN C; KNOX R; POSANI M; STEINER W J; TRUCKEY J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20050082517	A1	20050421	US 2002429843	P	20021127	200530 B
			US 2003441496	P	20030121	
			US 2003723694	A	20031126	
			US 2004936269	A	20040908	

Priority Applications (No Type Date): US 2004936269 A 20040908; US

2002429843 P 20021127; US 2003441496 P 20030121; US 2003723694 A 20031126

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20050082517	A1	26	B66D-001/00	Provisional application US 2002429843

Provisional application US 2003441496

CIP of application US 2003723694

Abstract (Basic): US 20050082517 A1

NOVELTY - The assembly has a winch assembly (14) connected to a carrier (12) to raise and lower the carrier between a stowed position and a deployed position. A sensor is activated when the carrier is in the stowed position. A warning indicator is operably connected to the sensor so that the warning indicator is activated when the carrier is out of the stowed position and the sensor is not activated.

USE - Used for storing a spare tire on a vehicle (claimed) e.g. automobile, recreational vehicle, trailer, off road vehicle such as dune buggies, industrial equipment, and golf cart.

ADVANTAGE - The warning indicator is activated when the carrier is out of the stowed position, thus allowing an operator provided with a visual warning of an undesirable situation.

DESCRIPTION OF DRAWING(S) - The drawing shows an exploded view of a tire carrier assembly.

Tire carrier assembly (10)

Tire carrier (12)

Winch assembly (14)  
 Tire plate (20)  
 Shaft (30)  
 pp; 26 DwgNo 1/15  
 Title Terms: CARRY; ASSEMBLE; VEHICLE; TRAILER; **SENSE** ; ACTIVATE; CARRY;  
 STOW; POSITION; **WARNING** ; **INDICATE** ; ACTIVATE; CARRY; STOW; POSITION;  
**SENSE** ; ACTIVATE  
 Derwent Class: Q22; Q38  
 International Patent Class (Main): B66D-001/00  
 International Patent Class (Additional): B62D-043/00  
 File Segment: EngPI

11/5/2 (Item 2 from file: 347)  
 DIALOG(R)File 347:JAPIO  
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06517654 \*\*Image available\*\*  
STORAGE STRUCTURE OF SPARE TIRE FOR VEHICLE

PUB. NO.: 2000-103372 [JP 2000103372 A]  
 PUBLISHED: April 11, 2000 (20000411)  
 INVENTOR(s): HANAZAKI MASANORI  
 TSUTAGAWA WATARU  
 WATANABE YOSHIKI  
 APPLICANT(s): MAZDA MOTOR CORP  
 APPL. NO.: 10-276699 [JP 98276699]  
 FILED: September 30, 1998 (19980930)  
 INTL CLASS: B62D-043/04

#### ABSTRACT

PROBLEM TO BE SOLVED: To surely prevent a **spare tire** from being unhoisted carelessly, a temporary tire from being stored inversely, and a normal tire from being stored by **detecting** that the spare tire is in the hoist completion position by a completion position **detector** .

SOLUTION: In a structure of **storing** a **spare tire** for a vehicle in a tire **storage** part in the rear face of a floor panel, a hoist completion position **detector** 15 is provided in the tire **storage** part so as to **detect** the **spare tire** T in a hoist completion position by the winding of a hoist cable 9 by an operation handle 14 and the arrival of a suspension tool 8 to the lifting end. In a stage where the **spare tire** T is not stored in the tire **storage** yet, it is so constituted that an operation handle 14 is not released from a hoist by a handle release prevention device 16. This constitution can surely prevent the hoist of the **spare tire** T from being unhoisted carelessly and, when a temporary tire is stored in a front/back inverse state, it is confirmed by non-arrival of a suspension tool to the lifting end.

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11/5/4 (Item 1 from file: 350)  
 DIALOG(R)File 350:Derwent WPIX  
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016632045      \*\*Image available\*\*

WPI Acc No: 2004-790758/200478

XRPX Acc No: N04-623054

Rear structure for motor vehicle, has control unit connected to guide plate and collision detection sensor to operate guide plate earlier than front displacement of spare tire caused by collision based on collision detection of sensor

Patent Assignee: NISSAN MOTOR CO LTD (NSMO )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2004322943	A	20041118	JP 2003123196	A	20030428	200478 B

Priority Applications (No Type Date): JP 2003123196 A 20030428

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 2004322943	A		7 B62D-043/04	

Abstract (Basic): JP 2004322943 A

NOVELTY - A guide plate (6), provided at a rear floor panel, moves a spare tire (2) downward. A control unit (10) is connected to the guide plate and a collision detection sensor (1) to operate guide plate earlier than the front displacement of spare tire caused by collision based on the collision detection of sensor.

USE - For storing spare tire at rear lower surface side of motor vehicle.

ADVANTAGE - Prevents damage to suspension frame provided at the front portion of spare tire since spare tire is reliably moved downward. Ensures reliable moving of spare tire during collision.

DESCRIPTION OF DRAWING(S) - The figure shows the perspective diagram of a motor vehicle rear structure. (Drawing includes non-English language text).

Collision detection sensor (1)

Spare tire (2)

Guide plate (6)

Control unit (10)

Rear side members (11L,11R)

pp; 7 DwgNo 1/4

Title Terms: REAR; STRUCTURE; MOTOR; VEHICLE; CONTROL; UNIT; CONNECT; GUIDE ; PLATE; COLLIDE; DETECT ; SENSE ; OPERATE; GUIDE; PLATE; EARLY; FRONT; DISPLACEMENT; SPARE; CAUSE; COLLIDE; BASED; COLLIDE; DETECT ; SENSE

Derwent Class: Q22

International Patent Class (Main): B62D-043/04

File Segment: EngPI

11/5/5 (Item 2 from file: 350)

\*\*\* CURRENT APPLICATION \*\*\*

DIALOG(R)File 350:Derwent WPIX

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015942784      \*\*Image available\*\*

WPI Acc No: 2004-100625/200411

Related WPI Acc No: 2003-373647

XRPX Acc No: N04-080202

Spare wheel holder pivotally connected to vehicle bodywork in tailgate region, has its position monitored by sensor to prevent collision with other vehicle parts

Patent Assignee: VOLKSWAGEN AG (VOLS ); BABEL F (BABE-I); BURNUS O (BURN-I); RIEMER H (RIEM-I)

Inventor: BABEL F; BURNUS O; RIEMER H

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 20304381	U1	20030528	DE U20304381	U	20030313	200411 B
US 20040124223	A1	20040701	US 2003671927	A	20030926	200444

Priority Applications (No Type Date): DE U20220177 U 20021230

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 20304381	U1		21	B62D-043/02	
US 20040124223	A1			B62D-043/00	

Abstract (Basic): DE 20304381 U1

NOVELTY - At least one **sensor** connected to a control device is used to determine one or more positions of the **spare wheel holder** (1). Certain vehicle functions or operations are blocked or permitted depending on the **holder** position.

USE - For **storing a spare wheel** inside a vehicle such as a car.

ADVANTAGE - The **holder** is prevented from colliding with other vehicle components, e.g. when the **tailgate** is open.

DESCRIPTION OF DRAWING(S) - Figure 1 shows a perspective view of the **holder** on a vehicle **tailgate**.

**Spare wheel holder** (1)

**Tailgate** (2)

Bearing (14)

**Tailgate** door (21)

Rear windscreen (25)

**Tailgate** door hinge axis (H)

pp; 21 DwgNo 1/9

Title Terms: SPARE; WHEEL; HOLD; PIVOT; CONNECT; VEHICLE; BODYWORK;

**TAILGATE** ; REGION; POSITION; MONITOR; **SENSE** ; PREVENT; COLLIDE; VEHICLE; PART

Derwent Class: Q17; Q22

International Patent Class (Main): B62D-043/00 ; B62D-043/02

International Patent Class (Additional): B60R-009/00 ; B60R-011/00

File Segment: EngPI

11/5/6 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015312712 \*\*Image available\*\*

WPI Acc No: 2003-373647/200336

Related WPI Acc No: 2004-100625

XRPX Acc No: N03-297942

Spare wheel holder for off-road vehicle, includes sensor detecting holder position and transmitting it to controller for vehicle functions

Patent Assignee: VOLKSWAGEN AG (VOLS )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
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DE 20220177 U1 20030313 DE 2002U2020177 U 20021230 200336 B

Priority Applications (No Type Date): DE 2002U2020177 U 20021230

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

DE 20220177 U1 10 B62D-043/02

Abstract (Basic): DE 20220177 U1

NOVELTY - A **sensor detects holder** (1) position, transmitting it to a controller. As a function of this position, vehicle functions are released or blocked. The wheel is mounted on the bodywork and can be swung out to provide access to the **tailgate**.

USE - A **spare wheel holder** particularly suitable for an off-road vehicle.

ADVANTAGE - The switch can be used to prevent damage to the **tailgate** or other parts of the vehicle, as a result of not swinging out the **spare wheel holder** into the correct position. It can also be used to assure correct and complete return of the **holder**, e.g. before the vehicle can be started.

DESCRIPTION OF DRAWING(S) - A perspective view of an implementation is presented, showing the hinged (3, 4) mountings.

**holder** (1)  
hinges (3, 4)  
actuator (10)  
circuit breaker/switch (12)  
pp; 10 DwgNo 1/2

Title Terms: SPARE; WHEEL; HOLD; ROAD; VEHICLE; SENSE ; DETECT ; HOLD; POSITION; TRANSMIT; CONTROL; VEHICLE; FUNCTION

Derwent Class: Q22; X22

International Patent Class (Main): B62D-043/02

File Segment: EPI; EngPI

11/5/8 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013299785 \*\*Image available\*\*

WPI Acc No: 2000-471720/200041

XRPX Acc No: N00-352965

Storing **structure of spare tire for motor vehicle, severs cooperation of hook and clamp reelasing tool, when sending out winding cable in predetermined amount from spare - tire storing condition**

Patent Assignee: MAZDA KK (MAZD )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000190878	A	20000711	JP 98373939	A	19981228	200041 B

Priority Applications (No Type Date): JP 98373939 A 19981228

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 2000190878 A 9 B62D-043/04

Abstract (Basic): JP 2000190878 A

NOVELTY - When sending out the winding cable by a predetermined amount from the **spare - tire storing condition**, the cooperation of

the hook and clamp releasing tool is severed and the hook is reset automatically to a clamp position.

DETAILED DESCRIPTION - The hanging tool (8) at one end of a winding cable (9) is connected to a hub hole (t1) of **spare tire** (T). A hook (28) is connected removably to the hanging tool so that the **spare tire** may not drop off when the **spare tire** is accommodated in a **tire storage**. A clamp releasing tool (30) releases the clamp condition to the hanging tool of the hook.

USE - For **storing spare tire** of motor vehicle.

ADVANTAGE - Improves operability and reduces labor by automatically severing cooperation of hook and clamp releasing tool and resetting hook to clamp position when sending out winding cable of predetermined amount from **spare - tire storage** condition.

DESCRIPTION OF DRAWING(S) - The figure shows a completion position **detector** and a separation prevention mechanism.

Hanging tool (8)

Winding cable (9)

Hook (28)

Clamp releasing tool (30)

**Spare tire** (T)

Hub hole (t1)

pp; 9 DwgNo 1/8

Title Terms: **STORAGE** ; STRUCTURE; SPARE; MOTOR; VEHICLE; SEVER; COOPERATE; HOOK; CLAMP; TOOL; SEND; WIND; CABLE; PREDETERMINED; AMOUNT; SPARE;

**STORAGE** ; CONDITION

Derwent Class: Q22

International Patent Class (Main): B62D-043/04

File Segment: EngPI

11/5/9 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013161042 \*\*Image available\*\*

WPI Acc No: 2000-332915/200029

XRPX Acc No: N00-250814

**Spare tire storing structure for vehicle**

Patent Assignee: MATSUDA KK (MAZD )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000103372	A	20000411	JP 98276699	A	1998093	200029 B

Priority Applications (No Type Date): JP 98276699 A 19980930

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

JP 2000103372 A 9 B62D-043/04

Abstract (Basic): JP 2000103372 A

NOVELTY - A hoisting apparatus performs rewinding operation through rotation of a steering wheel (14). When a steering wheel is operated, a winding cable (9) rolls up. A hanging tool (8) is raised to the end of a winding cable. A **spare tire** (T) is wound through a winding cable. A winding completion position **detector** (15) **detects** the completion positioning of a **spare tire**.

DETAILED DESCRIPTION - A steering wheel is inserted into the



push-in member (3a) of a hoisting apparatus, provided on the car inner side.

USE - For **storing spare tire** in vehicle.

ADVANTAGE - Eliminates need for **storing** e.g., temporary tire, normal tire in a reverse direction.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of winding completion position **detector**.

Push-in member (3a)

Hanging tool (8)

Winding cable (9)

Steering wheel (14)

Winding completion position **detector** (15)

**Spare tire** (T)

pp; 9 DwgNo 1/9

Title Terms: SPARE; **STORAGE**; STRUCTURE; VEHICLE

Derwent Class: Q22

International Patent Class (Main): B62D-043/04

File Segment: EngPI

11/5/10 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012356637 \*\*Image available\*\*

WPI Acc No: 1999-162744/199914

XRFX Acc No: N99-119079

**Suspension type spare tire fixture for motor vehicle - has detection unit which detects entry of operating lever into hole and makes carrier lamp illuminate**

Patent Assignee: NISSAN MOTOR CO LTD (NSMO )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 11020748	A	19990126	JP 97182123	A	19970708	199914 B

Priority Applications (No Type Date): JP 97182123 A 19970708

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11020748	A		5	B62D-043/04	

Abstract (Basic): JP 11020748 A

NOVELTY - A **spare tire** (20) is hung on a **carrier** (12) which is fixed to the frame of a motor vehicle. An operating lever inserted into an insertion hole makes the **carrier** to raise and lower the tire. A detection unit (26) **detects** the insertion of the lever correctly in the insertion hole and makes a lamp glow and illuminate the **carrier**.

USE - For housing **spare tire** in motor vehicle.

ADVANTAGE - Makes operators job easy to ascertain the coupling of operating lever to **carrier** due to illumination provided by the lamp. DESCRIPTION OF DRAWING(S) - The drawing shows a perspective diagram of tire attachment with illustrative wiring diagram for lamp. (12)

**Carrier**; (20) **spare tire**; (26) Detection unit.

Dwg.2/5

Title Terms: SUSPENSION; TYPE; SPARE; FIX; MOTOR; VEHICLE; **DETECT**; UNIT; **DETECT**; ENTER; OPERATE; LEVER; HOLE; CARRY; LAMP; ILLUMINATE

Derwent Class: Q22

International Patent Class (Main): B62D-043/04  
File Segment: EngPI

11/5/11 (Item 8 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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011136746 \*\*Image available\*\*

WPI Acc No: 1997-114670/199711

XRPX Acc No: N97-094873

Spare tyre mounting appts for motor vehicle - provides CCD camera which slides together with bolt holder, to detect spare tyre mounting position and accordingly stone bolt is used to fix spare tyre with vehicle chassis

Patent Assignee: HONDA MOTOR CO LTD (HOND )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9002350	A	19970107	JP 95153616	A	19950620	199711 B

Priority Applications (No Type Date): JP 95153616 A 19950620

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 9002350	A	8	B62D-065/00	

Abstract (Basic): JP 9002350 A

The appts provides a pair of pads (67a,67b) using which a wheel rim (64) of a spare tyre (66) is held. A CCD camera (50) which slides together along with a bolt holder (30), is provided to take photographs of a vehicle (70) through a central hole (98) of a wheel disc of the spare tyre. The position of a spare tyre attaching portion material (52) is calculated from the photographed image.

The position of the mounting unit is corrected by a correction unit. A stone bolt (34) which is held by the bolt holder protrudes through the central hole and is mounted on the spare tyre attaching portion material for fastening the spare tyre to the vehicle.

USE/ADVANTAGE - In motor vehicle production line. Improves production efficiency. Mounts spare tyre accurately and reliably at required positions.

Dwg.1/10

Title Terms: SPARE; TYRE; MOUNT ; APPARATUS; MOTOR; VEHICLE; CCD; CAMERA; SLIDE; BOLT; HOLD; DETECT ; SPARE; TYRE; MOUNT ; POSITION; ACCORD; STONE; BOLT; FIX; SPARE; TYRE; VEHICLE; CHASSIS

Derwent Class: P56; Q22

International Patent Class (Main): B62D-065/00

International Patent Class (Additional): B23P-021/00

File Segment: EngPI

11/5/12 (Item 9 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

009398849 \*\*Image available\*\*

WPI Acc No: 1993-092323/199311

XRPX Acc No: N93-070572

Spare wheel attachment device for vehicle - has wheel holder attached to arm which is turned in lengthwise vertical plane by hydraulic cylinder

Patent Assignee: NEFTEKAMA DUMP TRUCK WKS (NEFT-R)

Inventor: GORBUNOV O P; GORSHENIN V V; PONA S M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1726306	A1	19920415	SU 4746928	A	19891009	199311 B

Priority Applications (No Type Date): SU 4746928 A 19891009

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
SU 1726306	A1	4	B62D-043/02	

Abstract (Basic): SU 1726306 A

This vehicle spare wheel attachment device has an L-shaped lifting arm (1) with one end joined to an hydraulic cylinder (4). The arms' (1) other end has a wheel holder (7) joined to the wheel disc (9). The device's wheel holder (7) is attached by a tightening device (10) with a locator (11), to the vehicle body on which are at least three flexible elements. One is in the wheels lower section in its transporting position.

The side of the tyre is pressed against the flexible elements, reducing vibration.

ADVANTAGE - Gives simplified design and increased reliability due to lowering of vibration loading. Bul.14/15.4.92.

Dwg.1/3

Title Terms: SPARE; WHEEL; ATTACH; DEVICE; VEHICLE; WHEEL; HOLD; ATTACH; ARM; TURN; LENGTHWISE; VERTICAL; PLANE; HYDRAULIC; CYLINDER

Derwent Class: Q22

International Patent Class (Main): B62D-043/02

File Segment: EngPI

11/5/14 (Item 11 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009164599 \*\*Image available\*\*

WPI Acc No: 1992-292040/199235

XRPX Acc No: N92-223681

Carrier rack assembly mountable to vehicle rear door spare tyre mount - has is adjustably movable with six degrees of freedom, and has mounting hub detachably carrying rack

Patent Assignee: SHERIDAN D J (SHER-I)

Inventor: MOSHER B A; SHERIDAN D J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5137192	A	19920811	US 91767216	A	19910930	199235 B

Priority Applications (No Type Date): US 91767216 A 19910930

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 5137192	A	11	B62D-043/02	

Abstract (Basic): US 5137192 A

The assembly provides a mounting hub sandwiched between the existing **spare tyre** mounting device carried on the rear door of a vehicle and the **wheel** of the **spare tyre** carried on the door. This mounting hub detachably receives a **carrier rack** configured according to the invention and which **mounts** articles such as one or more bicycles, skis, a gas can, etc.

**Carrier rack** structures are adjustable both vertically and also in at least one horizontal **sense**. These **rack** structures are capable of adjustable movement in six degrees of freedom.

USE - **Carrier rack** assembly for mounting bicycles, skis and the like to the existing exterior **spare tyre mount** on the rear door of a vehicle.

bl

Dwg.1/11

Title Terms: CARRY; **RACK**; ASSEMBLE; **MOUNT**; VEHICLE; REAR; DOOR; SPARE; TYRE; **MOUNT**; ADJUST; MOVE; SIX; DEGREE; FREE; **MOUNT**; HUB; DETACH; CARRY; **RACK**

Derwent Class: Q22

International Patent Class (Main): B62D-043/02

File Segment: EngPI

11/5/16 (Item 13 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004072090

WPI Acc No: 1984-217631/198435

XRPX Acc No: N84-162863

**Vehicle spare wheel attachment device - has fixed and moving brackets and hollow holder in which moves rod with lug and manually operated hoist**

Patent Assignee: INDUSTR CONS MIN (INDU-R)

Inventor: CHIBISOV V P; IVANOV V I; SMAGIN B N

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1063684	A	19831230	SU 3505619	A	19821029	198435 B

Priority Applications (No Type Date): SU 3505619 A 19821029

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
SU 1063684	A	4		

Abstract (Basic): SU 1063684 A

The device has a fixed bracket, rigidly attached to a frame and a moving bracket for attaching the wheel and a hoist with self-locking device and a cable. In the hollow wheel **holder** is a rod with a lug, which moves lengthwise. The cable's free end is connected to the **holder** which has a **locator**.

When changing a **wheel**, the **spare wheel holder** (4) is released after nuts and a bolt are removed, by turning the hoist handle (20) with the self-locking device. The cable is then let go. The rod (5) turns around an axle, and simultaneously, the **holder** (4) moves along the rod (5). When the **spare wheel** is placed vertically, screws (22) are removed and the wheel touches the roadway.

A nut and clamp are taken off and the **wheel** removed. When fixing the **spare wheel** in position, the clamps and nuts attach it to the **holder** and by rotating the handle (20) in the opposite direction, the cable is wound on. The rod (5) then turns around the axle and the **holder** (4) moves into the upper position where it is attached by the bolt (19).

ADVANTAGE - Can be used on a wide range of vehicles. Bul.48/  
30.12.83

(4pp Dwg.No.1/5

Title Terms: VEHICLE; SPARE; WHEEL; ATTACH; DEVICE; FIX; MOVE; BRACKET;  
HOLLOW; HOLD; MOVE; ROD; LUG; MANUAL; OPERATE; HOIST

Derwent Class: Q22

International Patent Class (Additional): B62D-043/00

File Segment: EngPI

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## Foreign & International Patent Search – Follow-up search

### Search Strategy

Set	Items	Description
S1	15712	SPARE? ?
S2	1228	(TIRE OR TIRES OR TYRE OR TYRES) (2N) (CARRIER? OR STORAGE? - OR STORING? OR STORE? ? OR STOW??? OR RACK OR RACKS)
S3	16820	(REAR OR BACK OR TRUNK) (3N) (DOOR OR DOORS) OR HATCHBACK OR HATCH()BACK OR TAILGATE OR TAIL()GATE? ?
S4	1422277	SENSOR? OR DETECTOR?
S5	3001841	SIGNAL? OR INDICAT? OR WARN??? OR ALARM??? OR ALERT???
S6	477	S1(2N)S2
S7	0	S6 AND S3 AND S4 AND S5
S8	0	S6 AND S3 AND S4
S9	0	S2 AND S3 AND S4
S10	39	S2 AND S3
S11	0	S10 AND S5
S12	0	S6 AND S3 AND S4
S13	6	S6 AND S4
S14	1790	S1(3N) (TIRE OR TIRES OR TYRE OR TYRES)
S15	110	S14 AND S3
S16	1	S15 AND S4:S5
S17	1	S16 NOT S13
S18	0	S2 AND S3 AND S4:S5
S19	114	S2 AND S4:S5
S20	11	S6 AND S4:S5
S21	5	S20 NOT(S13 OR S17)

File 347:JAPIO Dec 1976-2005/Dec(Updated 060404)

(c) 2006 JPO & JAPIO

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200627

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### Search Results

21/5/4 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014832450 \*\*Image available\*\*

WPI Acc No: 2002-653156/200270

Spare tire carrier device

Patent Assignee: KIA MOTORS CORP (KIAM-N)

Inventor: JUNG J S; CHUNG J S

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2002030656	A	20020425	KR 200061695	A	20001019	200270 B
KR 376071	B	20030315	KR 200061695	A	20001019	200352

Priority Applications (No Type Date): KR 200061695 A 20001019

## Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
KR 2002030656	A		1	B62D-043/04	
KR 376071	B			B62D-043/04	Previous Publ. patent KR 2002030656

Abstract (Basic): KR 2002030656 A

NOVELTY - A **spare tire carrier** device is provided to carry out the sliding of support arms horizontally and vertically at the same time for inclining a spare tire with respect to the ground and protruding the spare tire to a side surface of a vehicle body.

DETAILED DESCRIPTION - A **spare tire** carrier device includes a control part(10) manipulated by a user to generate lifting or lowering **signals**, a pressure generating unit(20) connected to the control part for generating a pressure according to the lifting/lowering **signals**, a pair of sliding guides(30) of a predetermined length fixed to a vehicle body and formed with guide grooves(31) on side surfaces, an actuator(40) fixed to the vehicle body and coupled with a cylinder rod(41), the actuator being supplied with the pressure generated by the pressure generating unit via pipe lines(21), a support bar(50) coupled with the cylinder rod vertically and formed with support arms(51) at both sides, a slider(60) fitted into the guide grooves of the sliding guides and rotatably connected to an upper part of the support arms, link units(80) rotatably coupled with anchor elements(70) fixed to the vehicle body and connected to the support arms rotatably at lower ends, and a tire fixing bracket(90) coupled with cross bars(91) at ends of the support arms and detachably mounted with a spare tire.

pp; 1 DwgNo 1/10

Title Terms: SPARE; CARRY; DEVICE

Derwent Class: Q22

International Patent Class (Main): B62D-043/04

File Segment: EngPI

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## NPL Bibliographic Database Search

### Search Strategy

Set	Items	Description
S1	444472	SPARE? ? OR EXTRA OR EMERGENC???
S2	108540	TIRE OR TIRES OR TYRE OR TYRES
S3	2125202	CARRIER? OR RACK OR RACKS OR MOUNT??? OR HOLDER? OR STORING OR STORAGE? OR TAILGATE? OR TAIL()GATE? ?
S4	3043935	SENSOR? OR SENSE? ? OR SENSING OR DETECTOR? OR DETECT OR D- TECTS OR DETECTED OR DETECTING OR LOCATOR?
S5	5168352	SIGNAL? OR INDICAT? OR WARN? ? OR WARNED OR WARNING? OR AL- ARM? OR INFORM???
S6	40	S1(5N)S2(5N)S3
S7	1	S6 AND S4 AND S5
S8	2	(S6 AND S4) NOT S7
S9	767	S1(5N)S2
S10	19	S9 AND S4 AND S5
S11	18	S10 NOT S7:S8
S12	16	RD (unique items)
S13	3	S9 AND S3 AND S4
S14	252	SPARE? ?(3N)WHEEL? ?
S15	2	S14 AND S3 AND S4
S16	2	S15 NOT (S7:S8 OR S12)
S17	539	S2(5N) (CARRIER? OR RACK OR RACKS OR HOLDER? OR STORING OR - STORAGE? OR TAILGATE? OR TAIL()GATE? ?)
S18	2	S17 AND S4 AND S5
S19	2	S18 NOT (S7:S8 OR S12)
S20	22	S17 AND S4
S21	20	S20 NOT (S7:S8 OR S12 OR S19)
S22	15	RD (unique items)

File 2:INSPEC 1898-2006/Apr W3  
(c) 2006 Institution of Electrical Engineers

File 6:NTIS 1964-2006/Apr W3  
(c) 2006 NTIS, Intl Cpyrght All Rights Res

File 8:Ei Compendex(R) 1970-2006/Apr W3  
(c) 2006 Elsevier Eng. Info. Inc.

File 63:Transport Res(TRIS) 1970-2006/Mar  
(c) fmt only 2006 Dialog

File 65:Inside Conferences 1993-2006/Apr 28  
(c) 2006 BLDSC all rts. reserv.

File 81:MIRA - Motor Industry Research 2001-2006/Feb  
(c) 2006 MIRA Ltd.

File 94:JICST-EPlus 1985-2006/Jan W5  
(c) 2006 Japan Science and Tech Corp(JST)

File 95:TEME-Technology & Management 1989-2006/Apr W4  
(c) 2006 FIZ TECHNIK

File 144:Pascal 1973-2006/Apr W1  
(c) 2006 INIST/CNRS

File 99:Wilson Appl. Sci & Tech Abs 1983-2006/Mar  
(c) 2006 The HW Wilson Co.

File 323:RAPRA Rubber & Plastics 1972-2006/Apr  
(c) 2006 RAPRA Technology Ltd

File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13  
(c) 2002 The Gale Group



File 23:CSA Technology Research Database 1963-2006/Apr  
(c) 2006 CSA.

## Search Results

19/5/1 (Item 1 from file: 323)

DIALOG(R)File 323:RAPRA Rubber & Plastics

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00912546

**TITLE: INTELLIGENT WHEEL**

**AUTHOR(S):** Volk H; Kluge S

**CORPORATE SOURCE:** Continental AG

**CONFERENCE PROCEEDINGS:** IRC 2003. Proceedings of a conference held  
Nuremberg, 30th June-3rd July 2003

**CORPORATE EDITOR:** Deutsche Kautschuk Gesellschaft eV

**SOURCE:** Frankfurt, Deutsche Kautschuk Gesellschaft eV, 2003, p.177-80,  
30cm. 012

**JOURNAL ANNOUNCEMENT:** 200406 **RAPRA UPDATE:** 200411

**DOCUMENT TYPE:** Conference Papers

**LANGUAGE:** German

**SUBFILE:** (R) RAPRA

**ABSTRACT:** Behind the term 'intelligent wheel or tire' is the desire to get more functionality from the tyre itself. Beginning with clear identification from the **storage** of **tyre** data up to **sensor** functions and an adaptation to different driving conditions, the tyre of the future should more clearly be able to do more than it does today and actively be merged into vehicle management systems. Integration of electronics into the tyre is a demand of the automotive industry for clear identification of tyres and for the automatic documentation of the allocation to the vehicle. This should be done by RFID transponders, which are activated for reading and writing using an external antenna. Each transponder has an identification number and can be equipped with additional memory for **storage** of **tyre** data. The data can be read out on demand and supplemented by further information. In future, equipped with suitable **sensor** systems, tyres will **detect** air pressure, temperature, forces, speed and accelerations, which, transferred to the vehicle, can be used as check **signals** for vehicle control systems. Beyond that, approaches will be carried out to estimate the current maximum grip potential between tyres and road. A future requirement is that the tire not only **detect** its or environmental conditions, but actively adapts to respective driving conditions. Much basic research is still to be carried out, so use of the tyre as an actuator is a long way off.

**SUBJECT HEADING (RAPRA):** TYRES, **sensors**, car; **SENSORS**, tyres

**GEOGRAPHIC LOCATION:** EUROPEAN COMMUNITY; EUROPEAN UNION; GERMANY; WESTERN EUROPE

**DESCRIPTORS:** ACTUATOR; APPLICATION; AUTOMOTIVE APPLICATION; CAR TIRE; CAR TYRE; COMPANIES; COMPANY; CONTROL SYSTEM; DATA; ELASTOMER; ENVIRONMENT; FLEXURAL PROPERTIES; FORECAST; ROLLING RESISTANCE; RUBBER; **SENSOR**; STIFFNESS; TECHNICAL; TIRE; TIRE TREAD; TRANSPONDER; TREAD; TYRE; TYRE TREAD

**RAPRA CLASSIFICATION CODE:** 6T11

**CATEGORY CODES:** QR

## NPL Full-Text Database Search

### Search Strategy

Set	Items	Description
S1	246286	SPARE? ?
S2	279662	TIRE OR TIRES OR TYRE OR TYRES
S3	3827794	CARRIER? OR RACK OR RACKS OR HOLDER? OR STORING OR STORAGE? OR TAILGATE? OR TAIL()GATE? ?
S4	2403332	SENSOR? OR SENSE? ? OR SENSING OR DETECTOR? OR DETECT OR D- TECTS OR DETECTED OR DETECTING OR LOCATOR?
S5	5422151	SIGNAL? OR INDICAT? OR WARN? ? OR WARNED OR WARNING? OR AL- ARM? OR INFORM???
S6	490	S1(5N)S2(5N)S3
S7	1	S6 (S)S4(S)S5
S8	5	S6(S)S4
S9	4	S8 NOT S7
S10	4726	S1(5N)S2
S11	24	S10(S)S4(S)S5
S12	23	S11 NOT (S7 OR S9)
S13	19	RD (unique items)
S14	115	S10(S)S4
S15	45	S10(10N)S4
S16	36	S15 NOT (S7 OR S9 OR S12)
S17	27	RD (unique items)
S18	65567	S4(5N)(LOCATION? OR POSITION? OR LOCK OR LOCKS OR LOCKED OR LOCKING OR CLOSE? ? OR CLOSING OR UNLOCK??? OR OPEN???)
S19	4	S10(S)S18
S20	3	S19 NOT (S7 OR S9 OR S12 OR S16)

File 16:Gale Group PROMT(R) 1990-2006/Apr 28  
(c) 2006 The Gale Group

File 160:Gale Group PROMT(R) 1972-1989  
(c) 1999 The Gale Group

File 148:Gale Group Trade & Industry DB 1976-2006/Apr 28  
(c)2006 The Gale Group

File 621:Gale Group New Prod.Annou.(R) 1985-2006/Apr 28  
(c) 2006 The Gale Group

File 15:ABI/Inform(R) 1971-2006/Apr 28  
(c) 2006 ProQuest Info&Learning

File 624:McGraw-Hill Publications 1985-2006/Apr 28  
(c) 2006 McGraw-Hill Co. Inc

File 9:Business & Industry(R) Jul/1994-2006/Apr 27  
(c) 2006 The Gale Group

File 47:Gale Group Magazine DB(TM) 1959-2006/Apr 28  
(c) 2006 The Gale group

File 141:Readers Guide 1983-2005/Dec  
(c) 2006 The HW Wilson Co

File 484:Periodical Abs Plustext 1986-2006/Apr W3  
(c) 2006 ProQuest

## Search Results

13/3,K/5 (Item 2 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

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16431796 SUPPLIER NUMBER: 110116967 (USE FORMAT 7 OR 9 FOR FULL TEXT )

From option to necessity: Federal TPM system rules take effect in just two years and will transform tire-changing from lower-skilled work to a virtual art. (Tire Pressure Monitoring: Part 2 )

Motor Age, 122, 11, 64(6)

Nov, 2003

ISSN: 1520-9385

LANGUAGE: English

RECORD TYPE: Fulltext

WORD COUNT: 2604 LINE COUNT: 00205

... containing other functions. Vehicles with a full-size matching spare tire have five tire pressure sensors. Minivans, the Pacifica and the Viper use a dashboard warning lamp. The rest display individual tire pressures and can automatically learn the tire position to...

13/3,K/19 (Item 2 from file: 484)

DIALOG(R)File 484:Periodical Abs Plustext

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05582966 SUPPLIER NUMBER: 126054851 (USE FORMAT 7 OR 9 FOR FULLTEXT)

20/20 hindsight

Smith, Bruce W

Trailer Life (ITLI), v62 n7, p61-65, p.3

Jul 2002

ISSN: 0041-0780

JOURNAL CODE: ITLI

DOCUMENT TYPE: Commentary

LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 1048

TEXT:

... The fast-beeping tone, solid green and yellow lights, and flashing red light are all indicators you are in the "hazard zone," which activates at a distance of 30 inches from the sensors. Note that distance doesn't take into consideration the 10 inches or so of space the test trailer's spare tire occupies.

The final warning comes about 20 inches from the sensors, at which time the...

...continuous tone and all three lights on the LED display go to solid. With a spare tire hanging off the bumper, that equates to the driver having less than a foot to stop before smashing into whatever it is the sensors detect.

The ROSS system works without a hitch. We noted that the sensors "see" in an...

?